

Bulletin of the Gray Memorial Botanical Chapter

— OF THE —

AGASSIZ ASSOCIATION.

NUMBER I.

SECOND QUARTER,

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*ILLUSTRATED.

ALCOVE, N. Y., MAY 11, 1893.

Dear Members of the G. M. B. C.

The proposed amendment to our constitution making the annual fee \$2.00 for the purpose of printing reports, has been carried. Please send your dues to the Treasurer as soon as you can. We wish to have all the fees in by June 1st. Those who have sent \$1.00 of course only have to send the balance. After careful consideration it has been decided best to make it a rule to drop from the list of those receiving reports all who do not send either report or excuse each quarter said members to remain "dropped" until heard from. To ask that each member shall give evidence of interest in the chapter to the extent of sending an excuse at least does not seem to be requiring too much. We are pleased to be able to state that the lost reports have been recovered and that they will either be printed or circulated among those members who have not had them,

Cordially Yours,
C. L. SHEAR, Pres.

To THE OFFICERS AND MEMBERS OF
THE GRAY MEMORIAL BOTANICAL
CHAPTER OF A. A. REPORT FOR
QUARTER ENDING APRIL 1st, 1893.

NOTES ON *CARYA TOMENTOSA*.

This species, in the New England States and perhaps throughout the country (?) is the most abundant of the genus. It is a very beautiful tree, which has interested me greatly—my "particular friend" of the woods. At this time of the year, when its young branches are tipped with large round buds, enfolding the season's undeveloped growth, it has a marked individuality, and a tree-lover's eye may easily recognize it afar off, as it towers among its neighbors, equaling most of them and exceeding many, in height and spread; for the tree grows to a large size when the wood-cutter lets it alone—which he does not, as a general thing, the wood being so highly prized for fuel. The furrowed bark and stout, rugged branches have an aspect of strength and hardy endurance which is well associated with the rocky New

Plut. 40
England pastures where it seems especially at home.

In May, when the swollen buds unfold their silky, dark red scales, and the shoots of the season put forth, the tree exhales a peculiarly refined and penetrating fragrance. Gray calls it "resinous-scented," but the phrase seems inadequate to describe what is to me the most enticing of woodland odors. The young shoots are decidedly tomentose—stems, flowers and at least the under surface of the leaves; which have most frequently seven leaflets. The sterile flowers are clustered in dangling tassels at the base of the shoot, which is terminated by the inconspicuous fertile flowers, three or four in a bunch, looking much like hickory-nuts in embryo.

Later, when these are grown to large thick-shelled nuts, which ripen and begin to fall when the frost opens their hard outer husks, the lively squirrel, at least, appreciates the harvest. He is permitted to enjoy it for the most part undisturbed; the nuts, though fair-seeming enough at first sight, are not so toothsome as to offer much temptation to fastidious biped creatures. The knowing country boy, when he is after nuts, may snatch up one of these and "shy" it at the squirrel, but he does not stop to crack it; he goes along further, seeking a "shag-bark" tree.

The "mocker-nuts" are not always insipid to the taste; some of them are quite sweet and palatable, but the shell is thick and the kernel small and hard to get at; a task in which the squirrel has much the best of it. Generally, the nuts are large, globular in form and somewhat angled; but not infrequently they are oval and nearly smooth, for *Carya tomentosa* is a variable species, even in the same locality, scarcely any two trees producing nuts of the same size and shape. It is not surprising, therefore, that the nuts are commonly confounded with those of the

pig-nut or broom-hickory, *C. porcina*. All hickories except the shell-barks are "pig-nuts" in the popular estimation.

Respectfully submitted,

FRANCES WILSON.

Providence, R. I. March 30th 1893

MOSSES OF MT. DESERT ISLAND, MAINE.
THEODORE G. WHITE.

Having omitted to make my report to the "Moss Section" at the time it was due, perhaps it may not be amiss to send at this time a list of the mosses I have thus far collected on the Island of Mt. Desert, on the coast of Maine. The flora there possesses a peculiar interest to the botanist because in consequence of its northerly latitude collections made there help to establish the northerly range of many coast species; while at the same time, at least in the case of flowering plants, we find growing within a short distance from the ocean, and only a few feet above sea level, species which in more southerly New England and in the interior are restricted to high mountain summits.

The flora of Mt. Desert has also been brought into special notice through the unremitting labors of Messrs. Rand, Redfield, Faxon, Burrage and many others, in the endeavor to complete an exhaustive herbarium of the flora of the island, and the catalogue of which Mr. Rand hopes soon to issue with an accompanying map. My own collections have been almost exclusively on the south-eastern side of the island, about Seal Harbor. I am indebted to Mrs. E. G. Britton for the identification of last summer's mosses, as well as those mentioned in my last year's list.

Mosses of Mt. Desert Maine, collected by Theodore White, Aug 1892:

— *Dicranum scoparium*, Hedw.

Var. *Pallidum*, Muell.

— *squarrosum*, L. & J.

— *rupestre*, L. & J.

— *paludosum*, Brust & Schrimpf.

Var Falcatum.

- *Dicranum Spurium*, Hedw. (fruited!)
 - *Drummondii*, Muell.
 - *undulatum*, Turner. (The typical form and also a curious form with five pedicels.)
 - *flagellare*, Hedw.
 - *palustre*, Brid.
 - *fuscescens*, Turn.
 - *Schisti*, Lindh.
 - *longifolium*, Hedw.
 - *viride*, Schimp. (A single specimen.)

Dicranella heteromalla, Schimp.*Hypnum uncinatum*, Hedw.

- *Schreberi*, Willd.
- *triquetrum*, L.
- *splendens*, Hedw.
- *delicatulum*, L.
- *fluitans*? L.
- *Jamesii*, Aust.
- *aduncum*, Mitt?
- *chrysophyllum*, Brid.

Hypnum cupressiforme, L.

- var. *filiforme*, Brid.
- — *fastigiatum*
- — *Resupinatum*.
- Crista-castrensis*, L.
- *recurvans*, Schwaeger, (a single specimen.)
- *denticulatum*, L.
- *Novae-angliae*, Sullv & Lesq.
- *curvifolium*, Hedw.
- *cordifolium*, Hedw.
- *turfaceum*, Lundt?
- *velutinum*, L.
- *fertile*, Sendt?
- *ochraceum*, Turn.
- *eugyrium*, Schimp, (a single specimen.)

micans, Schwartz.

- *Haldanianum*, Hedw.
- *imponens*, Hedw.
- *plumosum*, Swz.
- *recognitum*, Hedw.
- *rutabulum*, L.

Mnium Hornum, L.

- *cuspidatum*, Hedw.
- *punctatum*, Hedw.
- *rostratum*, Schwaeger.

Polytrichum Communi, L.

- *juniperinum*, Willd.
- var *alpinum*, Schimp.
- *strictum*, Banks.
- *piliferum*, Schreb.

Philonotis Fontana, Brid, (two forms.)

- *Aulacomnium Palustre*, Schw, (three forms.)

Pogonatum Alpinum (L) Roehl.

- *Tetraphis Pellucida*, Hedw.

Tetraplodon Mnioides, Bruch & Schimp, (bearing beautiful fruit.)*Ceratodon Purpureus*, Brid*Bartramia Pomiformis*, Hedw.*Funaria Hygrometrica*, (L) Sibth.*Ulota Hutchinsiae*, Schpr.*phyllanta*, Brid.*Ulota Ludwigii*, Brid.*Bryum Caespiticium*, L, (a single specimen.)*Webera nutans*, Hedw.*Grimmia Apocarpa*, Hedw.var *gracilis*, N & H.*conferta*, Funck.*fasciculare*, Brid.*macrocarpum*, Brid.*Trematodon Ambiguum*, Hornsch*Atrichum undulatum*, (L) Beauv.*Hedwigia ciliata*, Ehrh.*Fontinalis Novae Agliae*, Sulliv.*Neckera pennata*, Hedw.*Leucobryum albidum*, Brid.- *glaucum*, (L) Schimp.*Andreaea petrophylla*, Ehrh.

Of some of these I collected only single specimens, of others I still have duplicates.

To the Gray Memorial chapter of the
A. A.

Greetings:—As a report I think I will tell you about our last years garden. My husband and I thought we would have a bed of native ferns so one afternoon a year ago last fall we betook ourselves to a place known to us

as "Aspidium Swamp" to lay in a stock of plants for the next year. We drove to a convenient house, left the team borrowed a wheelbarrow and spade, and went across lots to the swamp. We soon filled the wheel barrow and although it was a hard tug to get the load over stone walls we at last succeeded in reaching the house where we deposited the roots as best we could in the buggy and drove home. That was our first installment and last spring and summer we made several additions from different localities until now we have twenty-five species, namely:—*Polypodium vulgare*, *Adiantum pedatum*, *Pteris aquilina*, *Woodwardia Virginica* and *angustifolia*, *Asplenium Trichomanes*, *ebeneum*, *Thelypteroides*, and *Filix-foemina*. *Phegopteris hexagonoptera*, *Aspidium Thelypteris*, *Noveboracense*, *cristatum*, *marginale* and *aerostichoides*. *Onoclea sensibilis*, *Woodsia obtusa*, *Dicksonia pilosiuscula*, *Osmunda Claytoniana*, *regalis* and *cinnamomea*, *Botrychium ternatum* and *Virginianum*. These all did fairly well, though we were obliged to wage a continual warfare against dogs, cats, weeds, caterpillars, stones, sun and children. Our bed was one of the corners of the yard and therefore triangular in shape. We thought it would be a comparatively shaded spot, but in this we were mistaken, for we could hardly have chosen a sunnier place. We tried many schemes to shade it, and finally had an arbor built, covered over on top with wire netting, on which we spread hay, tying it on with string. At the back of the bed on one side was an old wall. The ground in the next yard was higher, coming to the top of the wall, so that there was earth enough between the stones to allow us to plant ferns like *polypodium vulgare* and *Asplenium Trichomanes*, in the chinks, where they did very well.

There are other ferns found about here which we hope to add to our collection, namely:—*Asplenium montanum*,

Phegopteris polypodioides and *Dryopteris*, *Aspidium cristatum* var.—*Clintonianum*, *Cystopteris fragilis*, and *Woodsia Ilvensis*. Besides the fern bed and running out from one end of it, was a long narrow bed in which we planted a few wild flowers such as *cypripedium acaule* and *pubescens*, *Trillium cernuum* and *erectum* *Oxalis violaceae*, *Polygonatum biflorum*, *Mitchella repens*, *Coptis trifolia* and a few others.

In this last bed there was a space where nothing was planted for the season, and yet such a crop as it bore! (We had had a load of black muck brought us and spaded into both beds to begin with.) I weeded this space out several times, but in a little while it would be full of flowering plants again. I began to realize the force of Mr. Charles Dudley Warner's remarks about "Pusley," as that was prominent among the other plants. However, I decided the "Witch grass" was even "meaner than pusley." I am sorry that I did not begin to make a list of these plants as they appeared, for sometimes one crop differed greatly from the next. Here is a list of the last growth I weeded:—*Lobelia inflata*,* *Panicum capillare*,* *Poa annua*,* *Plantago lanceolato*, *Mullugo verticillata*,* *smilax rotundifolia*, *Dioscorea villosa*, *Phytolacca decandra** *Geranium maculatum*, *Potentilla canadensis*, *Viola lanceolata*,* *Selaginella apus*, *Portulaca oleracea*, *Myriophyllum*, *Cerastium vulgatum*, besides two or three species of *Juncus* and a small green lichen, and some mosses. That is all I believe, but there may be a few more which I cannot at this time recall. We had planted a *Geranium Robertianum* in the further end of the bed, but after it had popped its seeds we had several plants scattered about, one of these 6 or 8 feet from the original plant.

Sincerely Yours,
FRANCES M. GRAVES.

*The plants marked with a star blossomed.

MRS. CHARLES B. GRAVES,
22 Franklyn St. New London Ct.,
March 29, 1893.

REPORT FOR APRIL, 1893.

I have not much of anything to report, but hope through the coming months to go to work on the spring flowers.

March 18 I took a walk in the woods and collected some pussy-willows, some Maple (*acer rubrum*) also Apple and Quince twigs. These I brought home and put in warm water in a warm room.

The Pussy-willows hardly showed any white in their buds, but inside of a week they opened up nicely.

In three days the Maple buds had begun to swell and in a week the flowers were fully developed. The flowers on one branch all had nine divisions of the perianth, six stamens, and two styles. On another branch the flowers were dioecious, having only stamens. These latter flowers were wholly yellow, but the perfect flowers had all the parts very prettily tinted with red as delicately as can be imagined.

The Apple and Quince have not changed or grown a particle.

Miss E. L. RUGGLES,
Milton, Mass.

April report of Edna Porter,
87 Bryant St. Buffalo, N. Y.

To the Officers and Members of the G.
M. B. C.

I regret to be obliged to say that my report will be made up entirely of odds and ends, as my principal work during the past winter has been in animal histology, which, though exceedingly interesting, does not furnish material for a botanical report.

The city is beginning to show signs of spring although winter is loth to leave the field, as was evidenced by a heavy fall of snow Friday and Saturday, April fifteenth and sixteenth.

The first robin was here as long ago as March 8, and now they delight us morning and evening with their sprightly call of "cheer up!" "cheer up!"

April sixth the ever welcome *Hepatica* was found in some woods near the city. *Acer dasycarpum* and *A. rubrum* have lost almost all their flowers, and the elms are nearly ready to take their place in the annual list.

April tenth, while stirring over the dead leaves covering my wild flower corner, what should I find peeping up at me with its dark red eyes, but the little *Erigenia bulbosa*, Nutt, or "Harbinger-of-Spring." This is a pretty plant, rather rare in this locality, belonging to the parsley family. It is smooth, with a divided leaf and a compact umbel of small white flowers, having five stamens and two styles. The plant is provided with an abundant supply of food material in the deep, round tuber from which it springs.

NOTE ON *UTRICULARIA VULGARIS* L.

Last fall while visiting the secretary of our division, I collected a quantity of *Utricularia vulgaris* or greater bladderwort. These plants I put in my globe, and as winter approached they gradually broke up, curled themselves up in tiny green balls, and sank to the bottom of the jar. The fact that they were kept in a warm room was not sufficient to overcome the habit of the plant; but perhaps it will in time.

In February I picked out several buds and placed them in a glass of water in a small heated room, for the large jar had been earlier carried to the cellar. In a few weeks the leaves composing the buds began to unfold, and at this writing two of the plants are three inches in length. The leaves are not well developed; but the bladders are, and it may be worth mentioning that the bladders appeared in the very first set of leaves above the bud leaves. Darwin speaks of this in "Insectivorous Plants," but I have been unable so far

to find further notice of it. No doubt, it has been observed by other members of the association.

To-day, looking at the jar in the cellar, I find that many of the buds have risen to the surface of the water and are beginning to grow. Perhaps the appended drawings will give a clearer idea of this development than any description*. Just now I am writing with one eye on my paper and with the other on the plants to see if the cyclops I have put into the dish are in danger of being caught by the tentacles surrounding the mouth of the bladder, but I fear, from the wariness with which the animals approach that such an account will not be ready for this report.

I have been making a few experiments in germination. The seeds of the smaller fringed gentian, *Gentiana detonsa*, and now I have about a hundred of the daintiest little plants imaginable, all not more than half an inch high.

My efforts with three of our orchids, *Epipactis helleborine*, *Aplectrum hyemale*, *Habenaria psycodes* have not been successful and probably will not be, because instead of sowing the seeds as soon as mature, as I have since learned ought to have been done, I kept them for three months.

I should be pleased to know if other members have tried the germination of orchid seeds and what their experience has been.

*It is to be regretted that drawings must be omitted from the BULLETIN. Members wishing to see them can have them by mail from the General Secretary.

GRAY MEMORIAL CHAPTER,
Second Quarter, April 1893.

MATHILDE SCHLEGEL.

Were these notes to be of our feathered friends there would be many

things to say, but of flowers—what? It is indeed too early though the pretty things are lifting their shivering heads from their beds of leaves wakened by the soft rains gently knocking at their doors and wooed by tender kisses of fitful fleeting April sunshine.

As Beethoven drew inspiration from the fields and woods of Heiligenstadt which he immortalized in his Pastoral symphony so this report was to have been scribbled beneath the sheltering arm of one of its subjects, but Nature drawing once more her mantle of white about her protects these early waifs from threatened cold forbidding anything so rash, especially after my being strongly impressed by Barrie's suggestions of the serious consequences which might ensue from an hour so spent.

Springing from the ground with a trunk forty-five (45) inches in circumference, a monster grape vine *Vitis* ——has climbed from branch to branch until it covers three trees, two of one species, *Acer saccharinum* and a Beech *Fagus ferruginea*. The maples stand close together, four feet apart, while the beech is eleven feet away. Thirty feet from the maples and upon the opposite side from that occupied by Beech No. 1, is another, No. 2, toward which the vine has reached and already taken possession of, while at right angles to No. 1 is No. 3, some twenty feet away, which is also within its toils. The great trunk soon subdivides into three main branches, of twenty-four, twenty and twenty-four inches, and these again divide innumerabley, hanging in fantastic festoons among the branches of the trees, some of them forming great loops and coils reaching nearly to the ground, which make springy and delightful swings. Others hugging the trunk of the maple more closely suggested their possibility to some romantic mind and seats have been fastened there. It was not until on a late fall ramble after Witchhazel that quite unexpectedly I came upon it,

and not having put forth leaf and blossom the species cannot now be given, but it seemed worth describing. Passing the beach woods, a tiny ravine is followed until where it opens up, the Hamamelis clothes the bank and above we reach our :

"—Secret nook in a pleasant land ;
Whose groves the frolic fairies planned;
Whose arches green the livelong day
Echo the blackbird's (robin's) roundelay.
And vulgar feet have never trod ;
A spot that is sacred to thought and
God."

Not far away is an interesting bit of woods of Hemlock and White Pine.

Here in pioneer days a giant pine was laid low. In its decay it nourished a seedling Yellow Birch, *Betula lutea*, until the new life rising from the old, stands a stately tree, waving its graceful sprays in the sunlight, a goodly tree, seventy-six inches in circumference at the base of the trunk. It is a very curious thing, the old stump remaining quite intact, is fifty-two inches in height, and measures fifteen feet around. Through this the great roots of the birch have burst and are exposed and not unlike the trunk in papery covering; while the tree, large and shapely as it is, has the base of its trunk so far above the ground. Moreover, nestled near the birch a tiny white pine has also gained a foothold and adds greatly to the interest, for we may conjecture, how later it too may usurp the right of the birch and reign instead. Will it be allowed to do this? Near by, not twenty feet away, stood another beautiful birch, companion to our specimen, the two seeming complete together. What was my distress on going to them during a winter ramble, to find the one with its noble head lying upon the ground; and it is pitiful indeed to see it now, the roots all faithfully performing their function; the vital sap bleeds from the severed stump, trickling down its sides to earth again, and to complete the tragedy, a

wasp was found drowned in the thick fluid. Was it entrapped, or as my companion suggested, so overcome by the superabundant sweetness that, whereas at first it would not, it finally could not leave. Poor thing!

MATHILDE SCBLEGEL,
Box 36 East Aurora, N. Y.

To the members of the G. M. B. C.
Report for 2nd Quarter, Stewart A.
Burnham, Vaughns, Washington
County, N. Y.

CARICES.

I have collected and studied this genus for years. I find them very difficult to determine at first, but they become easier as one understands them better. The plant must be in mature fruit for analysis, and a good botanical specimen consists of the roots, leaves, and mature fruit. I have been aided much in determining my collection, by Dr. A. W. Chapman of Fla., our southern botanist, who corrects my determinations.

The following is the list of indigenous carices, with dates of mature fruit and localities.

Those which mature in May are:
Carex conoidea, Schk. Woods.
communis Bailey. Sandy woods.
pedunculata, Muhl. Rocky woods.
Pennsylvanica, Lam, Rocky woods
 (early.)
plantaginea, Lam, Dry hilly woods.
umbellata, Schk, Sandy fields
 (early.)

JUNE.

Carex aperta, Boott. Low woods.
arctata Boott, " "
aurea Nutt. Dry hillside.
bromooides, Schk. Low woods in
 "tussocks."
canescens, L. Peat bogs.
castanea, Wahl. Meadows
cephaloidea, Boott. Dry wooded hills
cephalophora, Muhl. " " knolls.

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debilis, Michx. Woods.
Deweyana, Schw. Rocky copses.
digitalis, Willd. Pine woods.
eburnea, Boot. Limestone cliffs.
echinata, Murr—var *microstachys*,
 Bocckl, bogs.
exilis, Dew, Peat bogs.
filiformicus, L, “ “ and about ponds.
gracillima, Schw, Woods.
granularis, Muhl, “
grisea, Wahl, Meadows.
gyandra, Schw, Along brooks.
Hitchcockiana, Dew. Rocky woods.
hystricina, Wild. Wet places.
laxiflora, Lam, var *latifolia* Bott.
 Woods.
laxiflora, Lam, var *blanda*. Grassy
 places.
laxiflora, Lam, var *intermedia*. Grassy
 places.
longirostris, Torr. Shaded limestone
 cliffs.
magellanica, Lam. Peat bogs.
pallescens, L. Clay meadows.
polytrichoides, Muhl. Swamps.
prisina, Wahl. Along creeks.
riparia, Curtis. Very wet places.
rosea, Schk. Woods.
rosea, Schk, var *radiata*, Dew. Woods
stipata, Muhl. Peat bogs.
stricta, Lam, var *angustata*. Bailey.
 Along creeks in “tussocks.”
tenella, Schk. Peat bogs.
teretiuscula, Good. Peat bogs.
tribuloides, Wahl. Wet places.
trisperma, Dew. Peat bogs.
varia, Muhl. Woods.

JULY.

Carex folliculata, L. Low woods.
crinita, Lam. Along brooks.
flava, L. Along brooks.
flava, L, var *Oederi*, Ehrh. Unde-
 veloped peat bog.
intumescens, Rudge. Wet places.
Pseudo Cyperus, L, var *Americana*,
 Hoch. Along creeks and about
 ponds and peat bogs.
scabrata, Schw. Mountain brooks
 and low woods
sponganooides, Muhl. Copses.
squarrosa, L. Woods.

tribuloides, Wahl, var *cristata*, Bai-
 ley. Low grounds.
triceps, Mich. Old pastures.
trichocarpa, Muhl. Wet places.
vestita, Wild. Sandy fields.
vulpinooides, Michx. Wet places.
straminea, Willd. Rocks.

AUGUST-SEPTEMBER.

Carex lupulina, Muhl. Wet grounds.
lupulina, var *pedunculata*, Dew. Wet
 grounds.
lurida, Wahl. Wet grounds.
retrorsa, Schw., var *Hartii* Carey.
 Wet grounds.

Tuckermanii, Dew. Wet grounds.
 Of course many of these may be found
 matured in the latter days of the pre-
 vious month or in the first days of the
 following month. I have them nearly
 all duplicated, if you should desire to
 exchange.

Respectfully submitted,

STEWART H. BURNHAM.

March 29. 1893.

IN SEASON AND OUT OF IT.

BY WILLARD N. CLUTE,

Binghamton, N. Y.

At this season of the year, when it is
 too early to expect the spring flowers,
 and decidedly too late to search for
 those of autumn, memory minglest some-
 thing from both seasons and recalls
 those blossoms of spring flowers that
 can sometimes be found in autumn.
 The list at best is not a long one, but
 each year adds to it, and I have no
 doubt, that in due time—if my winter
 does not come too soon—I shall find
 blossoms of all our spring flowers in
 autumn. We are accustomed to think
 that when a plant stops blooming in
 spring, that is the end of it, but a
 closer look into the matter may cause
 many to wonder that all do not bloom a
 second time in the year. Several ani-
 mals hibernate in winter and aestivate
 in summer, taking little enjoyment in
 life when the temperature is either hot

or cold. The case of the spring plants seems to be an analogous instance. After the heat of summer, when mild days and warm rains bring a second spring, it is little wonder that the spring flowers put forth again.

Some flowers seem to be forming a habit of blooming thus, twice in the year. The red raspberry not only blooms twice, but often produces a fair crop of fruit as well, and some horticulturists are beginning to inquire if a bush cannot be produced that will ensure two crops annually. This raspberry's darker relation is not so impulsive and I have never found either fruit or flower in autumn.

After finding the bluet in blossom ten months in the year, I have some hesitancy in calling it a spring flower. I should hardly be surprised to find it blooming on some little patch of ground that peeped above the snow during the "January thaw."

"In March, December and July

Tis all the same with _____ the bluet. The dandelion is another blossom that greets us most of the year, as is also the chickweed. Both begin to bloom in March and are not uncommon in December. One dandelion I found on the 29th of December, and that in a latitude where we often have good skating by Thanksgiving Day.

Of all the spring plants, the one that is most sure to bloom in the fall is the common blue violet. It is generally found in corn and potato fields, where the removal of the crops and consequent flooding of their haunts with sunlight is doubtless what starts these plants to blooming. The arrow-leaved and dog violets in the grassy fields occasionally add their blossoms to the others without any special inducements in the way of extra light.

Putting aside the cultivated fruit trees, all of which occasionally bloom in autumn, we find some of their relations afield that are given to the same habit. The wild rose is one of the

surest of its kind and the potentillas follows close.

For a plant that is so widely and abundantly distributed as the hepatica, and one that blooms with so little persuasion in spring, it is remarkable that so few blossoms are found in autumn. Its congener, the arbutus, can hardly be induced to bloom in cultivation, but nature has a method of her own and I have found the flowers in the fall, though they are rare.

Glancing over the list it is found that this autumn flowering trait runs in certain families of plants, much as vices and virtues do in human families. The rose family heads the list with pear, peach, plum, cherry, apple, rose, raspberry, *Potentilla canadenis* and *P. norvegica*; the composites next with dandelion, daisy, *Rudebeckia hirta*, *Hieracium venosum*; the violets follow with *Viola cucullata*, *V. saggittata* and *V. canina* var *muhlenbergii*; then come the crowfoots with *Ranunculus fascicularis* and *Hepatica triloba*. The borage worts with *Houstonia*; the pinks with chickweed, the valerians with lamb's lettuce and the heaths with arbutus,—twenty-two species in all.

Binghamton, N.Y., March 15, 1893.

TO THE MEMBERS OF THE G. M. B. C.

A cordial invitation is extended to the members of the Chapter, to join the new corresponding Chapter for the study and exchange of Ferns. The work will be conducted much as that of the G. M. B. C. is, with an idea to learning as much as possible about the habits of the ferns. No previous knowledge of the subject is required and beginners are welcome, although the Chapter will contain many who are far advanced in the science. Already we have members in ten states, which will enable those who wish, to largely increase their collections by exchange. With a chapter devoted exclusively to ferns, this fascinating branch of botany

will be more easily studied. All communications should be addressed to

WILLARD N. CLUTE,
Binghampton, N. Y.

WORLD'S FAIR.

It has been suggested that a meeting be arranged for all our members who can attend the World's Fair. All who contemplate attending please write me at their earliest convenience, stating about the time that they expect to be there, so that arrangements may be made and a date decided upon. We hope there may be a large meeting, and we are sure all would find it pleasant and profitable.

C L. SHEAR, Pres.

Only a few reports have been received with sufficient promptitude to be included in the BULLETIN. It is hoped that the next number may include a full representation.

C. G. DuBois, Gen. Sec.

EXCUSES.

Mr. Chatterton's poor health has prevented his studying this winter until within the last few weeks, when he has worked on the determination of a collection of New Zealand mosses.

Miss Sanburn is unable to report, but has been studying the mosses of her section.

Mr. Ralph Ballard is too busy to report.

Mr. H. T. Blodgett has been working chiefly in sorting and labelling

Other excuses have been sent to Division Secretaries.

Members will please illustrate their papers on separate sheets, so that the drawings can be circulated by mail if desired.